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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,037	03/11/2004	Yasuaki Nozawa	0171-1068P	4654
2292 7590 03/28/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
HANDAL, KAITY V				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
03/28/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com



# Office Action Summary

## Application No.

10/797,037

## Applicant(s)

NOZAWA ET AL.

## Examiner

KAITY V. HANDAL

## Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_



## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/2008 has been entered.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klebe et al. (4,503,092) and Schutte et al. (DE 1,163,784) in view of Belligoi et al. (US 6,103,004).

With respect to claims 1-12, Klebe et al. discloses an apparatus for the hydrophobization of pyrogenically produced silica comprising: a means for pyrolyzing/burner (1) to form silica; a coagulation zone/means for agglomerating, (2); a series of cyclones (4, 5, 6); a fluidization vessel (11) which can hydrophobize and deacidify (col. 3, lines 35- 36); and a second cyclone (8) connected to an output (13) of the fluidization vessel (11); and a conduit network extending between the second cyclone (8) and the deacidifying section (inside vessel (11)) or the device for



removing halogen gas, the conduit network providing a flow path for returning hydrophobic silica collected by the second cyclone and/or the second filter to the deacidifying section or the device for removing halogen gas (as illustrated).

Klebe et al. has incorporated by reference the Schutte et al. patent.

Schutte et al. discloses wherein the deacidification and hydrophobization can take place in separate zones as well as in a single zone (col. 3, lines 54-60). Therefore, it is disclosed that it is known in the art that the hydrophobizing and deacidifying can be divided; and thereby, it would be obvious and inherent that the deacidification and hydrophobization zones are in fluid communication with one another.

Klebe et al. fails to disclose wherein the apparatus also comprises filters. Belligoi et al. teaches that pyrogenically prepared silica (col. 1, lines 19-23) can be separated from solids using a cyclone followed by a filter (col. 2, lines 33-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to also provide filters along with the cyclones in the device of Klebe et al. in order to achieve a desired level of separation as well as since filters are recognized by Belligoi et al. as a known separation means for pyrogenically prepared silica. Although the recitations of operational temperatures and velocities continue to be directed to a manner of operating the claimed device, and thus amount recitations of intended use (the manner of operating a device does not differentiate apparatus claims from the prior art; MPEP 2114), Schutte et al. further discloses operating temperatures of the device of 200°C to 800°C, especially 400°C-



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600°C (col. 3, line 48- col. 4, line 5) and velocities of about 2.0 cm/sec (col. 7, lines 26-36).

With respect to claims 1-12, claims describe operational conditions and do not limit the invented apparatus. While features of an apparatus may be recited either structurally or functionally, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997), see also *In re Swinehad*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does." *Hewlett-packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). MPEP 2114.

### ***Response to Arguments***

#### ***35 USC Rejection***

Rejection made under 35 USC 112 is withdrawn by examiner due to applicant's amendment made to the claims.

#### ***Prior Art rejection***

2. Applicant's arguments filed 2/22/2008 have been fully considered but they are not persuasive.

Applicant argues the following:



A. Applicant submits, on page 7 of the Remarks, that the Examiner's specific application of a broad disclosure in Belligoi et al. is not supported by any disclosure in the applied prior art and that the modification of the Klebe et al.-Schutte et al. apparatus proposed by the Examiner, where filters of Belligoi are added to the cyclones of Klebe, would not have been obvious.

Examiner respectfully disagrees. Klebe does teach having a second cyclone (8) structurally connected to a "conduit network" (as illustrated), said second cyclone (8) is downstream of a first cyclone (4, 5, 6) and also downstream of the top of the fluidized bed reactor (11), said second cyclone (8) returns solid silica to the fluidized bed reactor (11) (col. 3, lines 24-36). Klebe fails to explicitly teach having a filter with second cyclone but he does suggest filtering and separation of the solid silica (col. 3, lines 26-29), and as set forth above, Belligoi teaches a filter/cyclone combination where pyrogenically prepared silica (col. 1, lines 19-23) can be separated from solids using a cyclone followed by a filter (col. 2, lines 33-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to also provide filters along with the cyclones in the device of Klebe et al. in order to achieve a desired level of separation since filters are recognized by Belligoi et al. as a known separation means for pyrogenically prepared silica. Regarding the physical state of the material worked on, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, process limitations do not have patentable



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weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

B. On page 7 of the Remarks, Applicant further argues:

"...Even if the fluidized bed reactor 11 in the Klebe et al.-Schutte et al. apparatus is regarded as having separate zones for hydrophobization and deacidification, there is no feature of the fluidized bed reactor that could be identified as a deacidifying section or device or, more specifically, a deacidifying section or device to which hydrophobic silica is returned, as required by Applicant's claims. Also, there is no identifiable feature of the Klebe et al.-Schutte et al. apparatus that can provide communication between the hydrophobizing section or device and the deacidifying section or device in a lower portion of the fluidization vessel, as now required by Applicant's independent claims..."

Examiner respectfully disagrees. The disclosure made by Schutte et al. as referenced in Klebe suggests that it is known in the art that the deacidification and hydrophobization can take place in separate zones as well as in a single zone (col. 4, lines 54-60) and, therefore, it is disclosed that the hydrophobizing and deacidifying can be divided. Hence, there is a deacidifying section in the fluidized bed reactor (11) of Klebe which would obviously be in fluid communication with the hydrophobizing section. Furthermore, as illustrated in Klebe's apparatus, the net work of conduits downstream of second cyclone (8) returns the silica to the bottom portion of fluidized bed reactor (11) (as illustrated); therefore, the hydrophobizing and deacidifying zones would be intuitively located more so towards the bottom of the reactor (11).



In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that it is not obvious to combine Klebe et al. and Schutte et al. and Belligoi et al., the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaitly Handal whose telephone number is (571) 272-8520. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KH

3/20/2008

/Alexa D. Neckel/  
Supervisory Patent Examiner, Art Unit 1795



**Search Notes****Application/Control No.**

10/797,037

**Examiner**

KAITY V. HANDAL

**Applicant(s)/Patent under  
Reexamination**

NOZAWA ET AL.

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1795

**SEARCHED**

Class	Subclass	Date	Examiner
Updated	Search	3/20/2008	KH

**INTERFERENCE SEARCHED**

Class	Subclass	Date	Examiner

**SEARCH NOTES  
(INCLUDING SEARCH STRATEGY)**

	DATE	EXMR
Updated Key Word Search in EAST	3/20/2008	KH
Updated Inventorship Search	3/20/2008	KH